



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,526	01/18/2002	Yitzhak Zloter	172/57	7753

7590 10/09/2003

DR. MARK FRIEDMAN LTD.
C/O BILL POLKINGHORN
DISCOVERY DISPATCH
9003 FLORIN WAY
UPPER MARLBORO, MD 20772

EXAMINER

AGUIRRECHEA, JAYDI A

ART UNIT	PAPER NUMBER
----------	--------------

2834

DATE MAILED: 10/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/050,526	ZLOTTER ET AL.	
	Examiner	Art Unit	
	Jaydi A. Aguirrechea	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 0727.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 21-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-20 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>ids</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's election without traverse of Group I (Claims 1-20) in Paper No. 0703 is acknowledged.

Specification

2. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Itoh (US 4825116).

Itoh discloses an ultrasound transducer having a piezoelectric film with appropriate electrodes supported on, and secured to a spool.

5. Claims 1-3 and 5 are rejected under 35 U.S.C. 102(a) as being anticipated by Toda (US 6411014) and Toda (US 6400065).

Toda discloses an ultrasound transducer having a piezoelectric film with appropriate electrodes supported on, and secured to a spool ('065-Column 8, Lines 9-34).

With regards to claim 2, Toda discloses an electrical contact disposed on the support structure. (Figure 10B)

Art Unit: 2834

With regards to claims 3 and 5, Toda teaches the support structure having a protrusion and comprising an electrical contact.

6. Claims 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Radice (US 4633122), Hamada et al. (US 4469978) and Wilson (US4728844).

Radice, Hamada and Wilson, each reference teaches a piezoelectric element with electrodes overlapping to form an active area while lead or connection electrodes do not overlap to prevent the generation of unwanted stray fields.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toda (6400065) in view of Mount (US 4542564).

Toda discloses the claimed invention except for the clip to secure the piezoelectric element. Mount discloses the clip to secure a piezoelectric element to its support.

It would have been obvious to one skilled in the art at the time the invention was made to use the clip disclosed by Mount on the ultrasonic transducer disclosed by Toda for the purpose of securing the piezoelectric member.

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toda (6400065).

Toda discloses the claimed invention except for the location of the output terminal.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to place the output terminal on any convenient location, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toda (US 6400065) in view of Hamada et al. (US 4469978) or Wilson (US4728844).

Toda discloses the claimed invention but don't explicitly shows the electrical connecting strips in a non-overlapping relationship. However, providing non-overlapping electrical connections is known to prevent stray field generation as taught by Wilson and Hamada). For at least this reason it would have been obvious to one with ordinary skill in the art to provide any electrical connectors in a non-overlapping relationship.

12. Claims 9 and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Toda (6400065) in view of Porat (6140740).

Toda discloses the claimed transducer structure except for the specific four electrode pattern. However, Porat teaches this exact configuration on figure 7 to produce and/or receive

Art Unit: 2834

specific wave shapes. Thus, for this reason it would have been obvious to one of ordinary skill in the art to provide this specific configuration for Toda.

13. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toda (US 6400065) in view of McKenzie et al (US 6508775).

Toda discloses the basic structure of the claimed ultrasonic transducer. However, it fails to disclose the use of a spring element as an electrode. McKenzie use a spring electrode to increase strength, allow easier assembly and support the polymer piezoelement.

It would have been obvious to one skilled in the art at the time the invention was made to use the spring electrode disclosed by McKenzie on the ultrasonic transducer disclosed by Toda for the purpose of increasing strength, allow easier assembly or support the piezoelement.

14. Claims 16, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porat (6140740) in view of Radice (US 4633122) or Wilson (US 4728844).

Porat in figure 7 teaches the claimed transducer structure but does not use the thru holes to connect electrodes that are opposite sides of the piezoelements. However, Radice and Wilson show piercing the piezoelement to pass an electrical connection from one side to the other. This configuration allows same side output terminals and protects connections from mechanical wear (If then were placed on an outer edge surface). Thus, for at least these reasons it would have been obvious to one with ordinary skill in the art to provide thru hole connections in Porat.

15. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porat (6140740) in view of Radice (US 4633122) or Wilson (US 4728844) as applied to claim 16 above, and further in view of Toda (US 6400065) or Itoh (US 4825116).

Art Unit: 2834

This claims add the specific support structure and shape for the transducer. Toda and Itoh disclose the cylindrical support and piezoelement. The shapes are well known to provide a wide 360 degree operation. Since selection of a particular transducer shape would be considered with the skill expected of one with ordinary skill in the art, and the specific shape and its attributes are known, it would have been obvious to provide this shape for Porat, Radice or Wilson.

Double Patenting

16. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

17. Claims 14-15 are rejected under the judicially created doctrine of double patenting over claims 1-18 of U. S. Patent No. 6392330 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: an ultrasonic receiver, a piezoelectric film, a support structure and wherein an electrode is formed as a strip subtending substantially less than 90 degrees.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Allowable Subject Matter

18. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaydi A. Aguirrechea whose telephone number is 703-305-2277. The examiner can normally be reached on M-Th 9-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JAA
JAA
9/23/03

Thomas M. Dougherty
6